

<b>Etheridge Foundry &amp; Machine Co.</b>	)	<b>DEPARTMENTAL</b>
<b>Cumberland County</b>	)	<b>FINDINGS OF FACT AND ORDER</b>
<b>Portland, Maine</b>	)	<b>AIR EMISSION LICENSE</b>
<b>A-106-71-H-R (SM)</b>	)	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

# **I. REGISTRATION**

## **A. Introduction:**

Etheridge Foundry and Machine Co. (EFM) of Portland, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their iron foundry and machining facility.

## **B. Emission Equipment:**

EFM is authorized to operate the following air emission units:

### **Fuel Burning Equipment**

<b>Equipment</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Fuel Type, %Sulfur</b>	<b>Maximum Firing Rate (i.e. gal/hr)</b>	<b>Date of Installation</b>	<b>Stack #</b>
Diesel Generator #6	6.90	Diesel, 0.05	50.4	1994	6

### **Process Equipment**

<b>Equipment</b>
2-Electric induction furnaces - 1 ton capacity, each
1-American Wheelabrator shot blasting unit

- \* EFM operates a 0.245 MMBtu/hr oil fired space heater, a cold asphalt paint dip tank and green sand preparation equipment for molds. The space heater has a capacity less than 1.0 MMBtu/hr, and the dip tank and preparation equipment have no emissions. Therefore, this equipment is noted for inventory purposes only.

C. Application Classification:

The application for EFM does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005). With the facility fuel limit on diesel generator #6, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Diesel Generator #6:

Diesel generator #6 is used primarily to produce electricity. Diesel generator #6 has a maximum design heat input capacity of 6.90 MMBtu/hr firing diesel fuel, with a maximum sulfur content not to exceed 0.05% by weight. The generator was installed in 1994 and is therefore not subject to New Source Performance Standards, Subpart IIII, for Stationary Compression Ignition Internal Combustion Engines.

BPT for diesel generator #6 shall be the following:

1. EFM shall be limited to firing 100,000 gallons per calendar year of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. *Low Sulfur Fuel*, 06-096 CMR 106 (last amended June 9, 1999) regulates fuel sulfur content. However, the use of diesel fuel with a sulfur content not to exceed 0.05% is more stringent and shall be considered BPT.

3. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. However, a PM limit of 0.08 lb/MMBtu is more stringent and shall be considered BPT. The PM<sub>10</sub> limits are derived from the PM limits.
4. NO<sub>x</sub>, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
5. Visible emissions from diesel generator #6 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2), six (6) minute block averages in a continuous 3-hour period.

C. Electric Induction Furnaces:

EFM uses the 2 electric induction furnaces to melt iron for castings. Only clean material may be used safely in each electric induction furnace. Since there is only one electrical power supply for the two electric induction furnaces, only one electric induction furnace shall be operated at a time.

BPT for the electric induction furnaces shall be the operation of only one electric induction furnace at a time. The vents from the electric induction furnaces shall each not exceed an opacity on 10% on a six minute block average.

EFM is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR, Part 63, Subpart ZZZZZ. EFM shall meet the applicable requirements and deadlines specified in Subpart ZZZZZ.

D. Shot Blasting Unit:

The shot blasting unit is used to further clean the raw material before reaching the electric induction furnaces. The shot blasting unit vents to a baghouse with fabric filters.

BPT for the shot blasting unit shall be the use of fabric filters for the control of particulate matter. Also, BPT shall be an opacity not to exceed 10% from the baghouse based on a six minute block average.

EFM shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance.

E. Facility Emissions and Fuel Use Caps:

The following total allowable annual emissions for the facility are calculated based on the diesel generator #6 firing no more than 100,000 gallons per year of diesel fuel oil with a maximum sulfur content not to exceed 0.05% by weight:

G. Annual Emissions

EFM shall be restricted to the following annual emissions, based on a calendar year:

**Total Licensed Annual Emissions for the Facility**

**Tons/year**

(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Total	0.55	0.55	0.35	21.92	5.82	0.62

**III. AMBIENT AIR QUALITY ANALYSIS**

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, EFM is below the emissions level required for modeling and monitoring.

**ORDER**

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-106-71-H-R, subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

**STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples,

conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

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C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

**SPECIFIC CONDITIONS**

(16) Diesel Generator #6

A. Total fuel use for Diesel Generator #6 shall not exceed 100,000 gallons per calendar year of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of fuel use shall be kept on an annual basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

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Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Diesel Generator #6	PM	0.08	06-096 CMR 103(2)(B)(1)(a), BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Diesel Generator #6	0.55	0.55	0.36	22.08	5.87	0.62

D. Visible emissions from Diesel Generator #6 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2), six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) Electric Induction Furnaces

- A. Only one electric induction furnace shall operate at a time. [06-096 CMR 115, BPT]
- B. The vents from the electric induction furnaces shall each not exceed 10% opacity on a six minute block average. [06-096 CMR 101, BPT]
- C. EFM is subject to the NESHAP for Iron and Steel Foundries, 40 CFR, Part 63, Subpart ZZZZZ. EFM shall meet the applicable requirements and deadlines specified in Subpart ZZZZZ. [40 CFR, Part 63, Subpart ZZZZZ]

(18) Shot Blast Unit

- A. The shot blast unit shall vent to a baghouse with fabric filters. [06-096 CMR 115, BPT]
- B. Visible emissions from the baghouse shall not exceed 10% based on a six minute block average. [06-096 CMR 101, BPT]
- C. EFM shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. [06-096 CMR 115, BPT]

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- (19) EFM shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/5/2007

Date of application acceptance: 12/13/2007

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Jonathan Voisine, Bureau of Air Quality.